**AMENDMENTS TO THE CLAIMS**

Please amend Claims 1, 5, and 7 as follows:

1. (Currently Amended) An integrated circuit comprising an improved conductor-insulator-conductor (CIC) sandwich, wherein the CIC sandwich comprises:

a first conducting layer;

a first insulating layer deposited over the first conducting layer, wherein the first insulating layer comprises a structure having a plurality of oxygen cites partially filled by a plurality of oxygen atoms, wherein the unfilled oxygen cites define a concentration of oxygen vacancies;

a second conducting layer deposited over the first insulating layer, wherein the first conducting layer, the first insulating layer, and the second conducting layer define a three-dimensional contour; and

an oxygen-rich interface layer interposed between the first insulating layer and the second conducting layer, wherein the oxygen-rich interface layer acts as a sink for absorbing oxygen vacancies that migrate from the first insulating layer so as to reduce the buildup of oxygen vacancies at the interface layer and so as to reduce the concentration of oxygen vacancies of the first insulating layer.

2. (Original) The integrated circuit of Claim 1, wherein the second conducting layer comprises a plurality of oxygen-rich regions that are distributed throughout the second conducting layer, said regions absorbing oxygen vacancies that migrate through the second conducting layer.

3. (Original) The integrated circuit of Claim 2, wherein the second conducting layer comprises a material selected from the group consisting of platinum (Pt), ruthenium (Ru), ruthenium oxide ($RuO_x$), iridium (Ir), iridium oxide ($IrO_x$), palladium (Pd), tungsten (W), tungsten nitride (WN), tantalum nitride (TaN), titanium nitride (TiN), and titanium oxygen nitride (TiON).

4. (Original) The integrated circuit of Claim 2, wherein the second conducting layer has a thickness between 100 Å and 2000 Å.

5. (Currently Amended) The integrated circuit of Claim 2, wherein the second conducting layer is highly oxidized.

6. (Original) The integrated circuit of Claim 5, wherein the second conducting layer has a quantity of oxygen atoms greater than that which is required for stoichiometric stability.

7. (Currently Amended) The integrated circuit ~~method~~ of Claim 6, wherein the second conducting layer comprises a layer of $IrO_x$ such that x is greater than 2.0 and less than 2.5.

8. (Original) The integrated circuit of Claim 2, wherein the first conducting layer comprises a material selected from the group consisting of conductively doped polysilicon, hemispherical grain (HSG) polysilicon, platinum (Pt), ruthenium (Ru), ruthenium oxide ($RuO_x$), iridium (Ir), iridium oxide ($IrO_x$), palladium (Pd), tungsten (W) tungsten nitride ($WN_x$), tantalum nitride (TaN), titanium nitride (TiN), and titanium oxygen nitride (TiON).

9. (Original) The integrated circuit of Claim 1, wherein the structure of the first insulating layer is a crystalline structure.

Please add Claims 10-47 as follows:

10. (New) A CIC structure comprising:

a first electrode layer formed in a via so as to contour the via;

a dielectric layer formed on the first electrode layer so as to overlie the first electrode layer, wherein the dielectric layer defines a structure having a first concentration of oxygen vacancies; and

a second electrode layer formed on the dielectric layer so as to overlie the dielectric layer, wherein the second electrode layer is formed in a strongly oxidizing ambient selected so as to diffuse at least a portion of the oxygen atoms into the dielectric layer to thereby reduce the concentration of oxygen vacancies in the dielectric layer from the first concentration and so as to define an oxygen-rich interface layer between the second electrode layer and the dielectric layer that subsequently absorbs the displaced oxygen vacancies migrating out of the dielectric layer, wherein reducing the concentration of oxygen vacancies in the dielectric layer provides the first electrode layer with improved electrical characteristics.

11. (New) The structure of Claim 10, wherein the first electrode layer, the dielectric layer, and the second electrode layer define a three-dimensional contour.

12. (New) The structure of Claim 10, wherein the CIC structure is formed in a via such that the first electrode layer, the dielectric layer, and the second electrode layer contour the via.

13. (New) The structure of Claim 12, wherein the via is formed in a substrate.

14. (New) The structure of Claim 10, wherein the second electrode layer comprises a plurality of oxygen-rich regions that are distributed throughout the second electrode layer, said regions absorbing oxygen vacancies that migrate through the second electrode layer.

15. (New) The structure of Claim 10, wherein the second electrode layer comprises a material selected from the group consisting of platinum (Pt), ruthenium (Ru), ruthenium oxide ($RuO_x$), iridium (Ir), iridium oxide ($IrO_x$), palladium (Pd), tungsten (W), tungsten nitride (WN), tantalum nitride (TaN), titanium nitride (TiN), and titanium oxygen nitride (TiON).

16. (New) The structure of Claim 10, wherein the second electrode layer has a thickness between 100 Å and 2000 Å.

17. (New) The structure of Claim 10, wherein the second electrode layer is highly oxidized.

18. (New) The structure of Claim 10, wherein the second electrode layer has a quantity of oxygen atoms greater than that which is required for stoichiometric stability.

19. (New) The structure of Claim 10, wherein the second electrode layer comprises a layer of $IrO_x$ such that x is greater than 2.0 and less than 2.5.

20. (New) The structure of Claim 10, wherein the first electrode layer comprises a material selected from the group consisting of conductively doped polysilicon, hemispherical grain (HSG) polysilicon, platinum (Pt), ruthenium (Ru), ruthenium oxide ($RuO_x$), iridium (Ir), iridium oxide ($IrO_x$), palladium (Pd), tungsten (W) tungsten nitride ($WN_x$), tantalum nitride (TaN), titanium nitride (TiN), and titanium oxygen nitride (TiON).

21. (New) The structure of Claim 10, wherein the structure of the dielectric layer is a crystalline structure.

22. (New) A CIC device comprising:

a lower electrode;

a dielectric layer formed on the lower electrode, wherein the dielectric layer comprises a first concentration of oxygen vacancies; and

an upper electrode formed on the dielectric layer, wherein the upper electrode is deposited in a strongly oxidizing ambient selected so as to form a highly oxidized upper electrode with an oxygen-rich interface layer at the interface between the dielectric layer and the upper electrode that subsequently absorbs the displaced oxygen vacancies migrating out of the dielectric layer while oxidizing the dielectric layer to thereby reduce the concentration of oxygen vacancies in the dielectric layer from the first concentration, and wherein reducing the concentration of oxygen vacancies in the dielectric layer provides the CIC device with increased capacitance.

23. (New) The device of Claim 22, wherein the lower electrode, the dielectric layer, and the upper electrode define a three-dimensional contour.

24. (New) The device of Claim 22, wherein the CIC device is formed in a via such that the lower electrode, the dielectric layer, and the upper electrode contour the via.

25. (New) The device of Claim 24, wherein the via is formed in a substrate.

26. (New) The device of Claim 22, wherein the upper electrode comprises a plurality of oxygen-rich regions that are distributed throughout the upper electrode, said regions absorbing oxygen vacancies that migrate through the upper electrode.

27. (New) The device of Claim 22, wherein the upper electrode comprises a material selected from the group consisting of platinum (Pt), ruthenium (Ru), ruthenium oxide ($RuO_x$), iridium (Ir), iridium oxide ($IrO_x$), palladium (Pd), tungsten (W), tungsten nitride (WN), tantalum nitride (TaN), titanium nitride (TiN), and titanium oxygen nitride (TiON).

28. (New) The device of Claim 22, wherein the upper electrode has a thickness between 100 Å and 2000 Å.

29. (New) The device of Claim 22, wherein the upper electrode is highly oxidized.

30. (New) The device of Claim 22, wherein the upper electrode has a quantity of oxygen atoms greater than that which is required for stoichiometric stability.

31. (New) The device of Claim 22, wherein the upper electrode comprises a layer of $IrO_x$ such that x is greater than 2.0 and less than 2.5.

32. (New) The device of Claim 22, wherein the lower electrode comprises a material selected from the group consisting of conductively doped polysilicon, hemispherical grain (HSG) polysilicon, platinum (Pt), ruthenium (Ru), ruthenium oxide ($RuO_x$), iridium (Ir), iridium oxide ($IrO_x$), palladium (Pd), tungsten (W) tungsten nitride ($WN_x$), tantalum nitride (TaN), titanium nitride (TiN), and titanium oxygen nitride (TiON).

33. (New) The device of Claim 22, wherein the structure of the dielectric layer is a crystalline structure.

34. (New) A CIC structure comprising:

first and second conductive layers;

an insulating layer interposed between the first and second conductive layers, wherein the insulating layer includes a plurality of oxygen vacancies; and

an interface layer interposed between the insulating layer and the second conductive layer, wherein the interface layer includes an increased concentration of oxygen atoms such that exposure to an electric field urges a portion of the oxygen vacancies in the insulating layer to migrate toward the interface layer.

35. (New) The structure of Claim 34, wherein the insulating layer is deposited over the first conductive layer, and wherein the insulating layer comprises a plurality of oxygen cites that are partially filled with a plurality of oxygen atoms, and wherein the unfilled oxygen cites define a first concentration of oxygen vacancies.

36. (New) The structure of Claim 34, wherein the second conductive layer is deposited over the insulating layer, and wherein the interface layer is interposed between the insulating layer and the second conductive layer, wherein the interface layer absorbs oxygen vacancies that migrate from the first conductive layer so as to reduce the buildup of oxygen vacancies at the interface layer and so as to reduce the first concentration of oxygen vacancies of the insulating layer.

37. (New) The structure of Claim 34, wherein the first conductive layer, the insulating layer, and the second conductive layer define a three-dimensional contour.

38. (New) The structure of Claim 34, wherein the CIC device is formed in a via such that the first conductive layer, the insulating layer, and the second conductive layer contour the via.

39. (New) The structure of Claim 38, wherein the via is formed in a substrate.

40. (New) The structure of Claim 34, wherein the second conductive layer comprises a plurality of oxygen-rich regions that are distributed throughout the second conductive layer, said regions absorbing oxygen vacancies that migrate through the second conductive layer.

41. (New) The structure of Claim 34, wherein the second conductive layer comprises a material selected from the group consisting of platinum (Pt), ruthenium (Ru), ruthenium oxide ($RuO_x$), iridium (Ir), iridium oxide ($IrO_x$), palladium (Pd), tungsten (W), tungsten nitride (WN), tantalum nitride (TaN), titanium nitride (TiN), and titanium oxygen nitride (TiON).

42. (New) The structure of Claim 34, wherein the second conductive layer has a thickness between 100 Å and 2000 Å.

43. (New) The structure of Claim 34, wherein the second conductive layer is highly oxidized.

44. (New) The structure of Claim 34, wherein the second conductive layer has a quantity of oxygen atoms greater than that which is required for stoichiometric stability.

45. (New) The structure of Claim 34, wherein the second conductive layer comprises a layer of $IrO_x$ such that x is greater than 2.0 and less than 2.5.

46. (New) The structure of Claim 34, wherein the first conductive layer comprises a material selected from the group consisting of conductively doped polysilicon, hemispherical grain (HSG) polysilicon, platinum (Pt), ruthenium (Ru), ruthenium oxide ($RuO_x$), iridium (Ir), iridium oxide ($IrO_x$), palladium (Pd), tungsten (W) tungsten nitride ($WN_x$), tantalum nitride (TaN), titanium nitride (TiN), and titanium oxygen nitride (TiON).

47. (New) The structure of Claim 34, wherein the structure of the insulating layer is a crystalline structure.